

Medc 319: Computer-Aided Drug Design

The student will learn to utilize state-of-the-art commercial software to conduct Computer-Aided Structure Based Drug Design (CADD). De novo design will be conducted after database screening (aka database mining, virtual screening) as a method to invent small molecules that bind to the active site(s) of protein X-ray structures. The course will involve discussion of protein molecules, X-ray crystallography produced structures of proteins or protein-ligand complexes, molecular interactions that are either attractive or repulsive in nature, and computer software for visualization, manipulation, and energy calculations.

2 Credits

Prerequisites

Pre-requisite: Pharmacy PY1 or PY2

Instruction Type(s)

Lecture/Lab: Lecture/Lab for Medc 319

Subject Areas

Pharmaceutical Sciences

Related Areas

- <u>Clinical and Industrial Drug Development (MS, PhD)</u>
- Industrial and Physical Pharmacy and Cosmetic Sciences (MS, PhD)
- Medicinal and Pharmaceutical Chemistry
- Natural Products Chemistry and Pharmacognosy (MS, PhD)
- Pharmaceutical Marketing and Management
- Pharmaceutics and Drug Design (MS, PhD)
- Pharmacoeconomics/Pharmaceutical Economics (MS, PhD)
- Pharmacy (PharmD USA PharmD, BS/BPharm Canada)
- Pharmacy Administration and Pharmacy Policy and Regulatory Affairs (MS, PhD)
- Pharmacy, Pharmaceutical Sciences, and Administration, Other

The University of Mississippi is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award certificates and baccalaureate, master's, specialist, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or visit online at www.sacscoc.org for questions about the accreditation.

